

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 98-110

AMENDMENT OF SITE CLEANUP REQUIREMENTS (ORDER NOS. 91-137, 91-139, AND 91-140) FOR:

NATIONAL SEMICONDUCTOR CORPORATION, ADVANCED MICRO DEVICES,
UNITED TECHNOLOGIES CORPORATION, HEWLETT-PACKARD, AND
SHAHINIAN TRUST
OPERABLE UNIT 1, SUBUNITS 1, 2, AND 3
SUNNYVALE, SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter referred to as the Board), finds that:

1. **Regional Board Order:** The Board adopted final site cleanup requirements (Order Nos. 91-137, 91-139, and 91-140) for Operable Unit 1, subunits 1, 2, and 3 on September 18, 1991. The orders were adopted pursuant to Water Code Section 13304. Hewlett-Packard was named as secondarily responsible discharger based on its ownership of the 1050 E. Arques Avenue site (located within subunit 1) at the time the orders were adopted. National Semiconductor and Advanced Micro Devices were named as the primary dischargers responsible for cleanup of VOCs in Operable Unit 1.
2. **Site History:** From 1960 to 1983, United Technologies Corporation (UTC) utilized the site for research, development, and small scale rocket testing. In 1982 the site was purchased by Hewlett-Packard. Hewlett-Packard removed the UTC buildings and auxiliary facilities, replacing them with a park and conference and parking facilities. Investigations indicate that VOCs were released at the site during UTC's operations, and that the VOCs have impacted soil and groundwater.
3. **Removal of Discharger:** Hewlett-Packard should no longer be named as a discharger because it no longer owns the 1050 E. Arques Avenue site.
4. **Current Property Owner:** Applied Materials purchased the 1050 E. Arques Avenue site in 1995 from Hewlett Packard. Applied Materials should not be named as a discharger for the following reasons: National Semiconductor (which has assumed cleanup responsibility for the former UTC facility) and AMD have not requested that Applied Materials be named in the orders; National Semiconductor and AMD have adequate financial resources to comply with the orders to which they are named; and National Semiconductor and Advanced

Micro Devices have complied with the orders. However, Applied Materials may be named in the future if circumstances change.

5. **CEQA:** This action is an amendment of an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.
6. **Notification:** The Board has notified the discharger and all interested agencies and persons of its intent under California Water Code Section 13304 to prescribe site cleanup requirements for the discharge, and has provided them with an opportunity to submit their written comments.
7. **Public Hearing:** The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code that the dischargers shall comply with the following:

A. Order No. 91-137 for Subunit 1 shall be amended as follows:

1. Heading. Hewlett-Packard shall be removed from the order as a discharger.
2. Finding 2. Modify to read:

“Separate Board Orders have been prepared for each Subunit in Operable Unit 1. The three Board Orders combined comprise the final cleanup plans for Operable Unit 1. As described in Finding 1. above, the three Subunits and corresponding three Board orders facilitate the allocation of responsibility for soil and ground water contamination among the facilities in Operable Unit 1.

The Board will adopt a Remedial Action Plan (RAP) for Operable Unit 1 after the Board issues Nonbinding Preliminary Allocation of Responsibility (NBAR) for Operable Unit 1. With the exception of the NBAR requirement, the three Orders comply with all other requirements for a RAP.

On September 14, 1987, NSC and UTC executed an agreement whereby NSC assumed soil and ground water cleanup responsibility for the former UTC facility. Hewlett Packard (HP) purchased the former UTC facility in 1982. In 1996 HP sold the former UTC facility to Applied Materials. UTC, as the party who released contaminants to the soil and ground water at the former UTC facility, is named as a discharger. However, NSC has assumed full responsibility

to complete all necessary soil and ground water remedial action programs related to the former UTC facility and the ground water plume emanating from the facility.

NSC notified the board on July 12, 1991 that one of the source areas at the NSC facility, Building 19, was owned by the Shahinian Trust (ST). ST was notified on July 26, 1991 that, as landowner of Building 19, ST is secondarily responsible for the cleanup of soil and ground water contamination emanating from NSC's Building 19 source area.

Therefore, with the exception of Provision C.3.b. and c. relative to the former UTC facility and NSC's Building 19, UTC and ST are secondarily liable and have responsibility for the soil and ground water cleanup only in the event that NSC fails to comply with prohibitions, specifications, and provisions of this Board Order. NSC, UTC, and ST are hereinafter referred to as dischargers.

Pursuant to California Health and Safety Code Sections 25356.1 (c) and (d), the identified responsible parties associated with the release of contaminants to the subsurface in Subunit 1 are NSC, UTC, and ST. As described in the preceding paragraph, NSC has assumed full responsibility to complete all necessary remedial action programs related to Subunit 1 and the ground water plume emanating from these facilities within Subunit 1.

The purpose of final remedial actions in each subunit is to reduce additional migration of contaminants from soil and ground water and to control the migration of contaminated groundwater from each subunit. The intent of actions required in this Order is to expedite cleanup of ground water in Subunit 1 and to prevent movement of the contaminated ground water to other subunits and potential vertical migration into aquifers that currently serve as drinking water sources."

3. Provision C.2. Revise to read: *"If NSC fails to comply with any of the provisions of this Order, within sixty (60) days of the Executive Officer's determination and actual notice, UTC and ST shall comply with the provisions of this Order."*

B. Order No. 91-139 for Subunit 2 shall be amended as follows:

1. Heading. Hewlett-Packard shall be removed from the order as a discharger.
2. Finding 2. Modify to read:

"Separate Board Orders have been prepared for each Subunit in Operable Unit 1. The three Board Orders combined comprise the final cleanup plans for Operable Unit 1. As described in Finding 1. above, the three Subunits and

corresponding three Board orders facilitate the allocation of responsibility for soil and ground water contamination among the facilities in Operable Unit 1.

The Board will adopt a Remedial Action Plan (RAP) for Operable Unit 1 after the Board issues Nonbinding Preliminary Allocation of Responsibility (NBAR) for Operable Unit 1. With the exception of the NBAR requirement, the three Orders comply with all other requirements for a RAP.

As shown in Figure 1, the AMD facility, located in Subunit 2, is directly downgradient of the NSC and former UTC facilities, located in Subunit 1. Therefore, in Subunit 2, the ground water contaminant plumes emanating from the NSC and former UTC facilities are considered to be commingled with the ground water contaminant plume from the AMD facility. Therefore, NSC and UTC are also referred to as dischargers in this Board Order for Subunit 2. Furthermore, since the commingled plumes extend from Subunit 2 into Subunit 3, NSC, UTC, and AMD are referred to as dischargers in Subunit 3.

On September 14, 1987, NSC and UTC executed an agreement whereby NSC assumed soil and ground water cleanup responsibility for the former UTC facility. Hewlett Packard (HP) purchased the former UTC facility in 1982. In 1996 HP sold the former UTC facility to Applied Materials. UTC, as the party who released contaminants to the soil and ground water at the former UTC facility, is named as a discharger. However, NSC has assumed full responsibility to complete all necessary soil and ground water remedial action programs related to the former UTC facility and the ground water plume emanating from the facility.

NSC notified the board on July 12, 1991 that one of the source areas at the NSC facility, Building 19, was owned by the Shahinian Trust (ST). ST was notified on July 26, 1991 that, as landowner of Building 19, ST is secondarily responsible for the cleanup of soil and ground water contamination emanating from NSC's Building 19 source area.

Therefore, UTC and ST are secondarily liable and have responsibility for the soil and ground water cleanup only in the event that NSC fails to comply with prohibitions, specifications, and provisions of this Board Order.

Semiconductor manufacturing operations were begun at the current AMD facility by Monolithic Memories (MMI) in 1970. AMD acquired MMI and their property in 1987 and assumed responsibility for continuing the soil and ground water investigations and remediation program for the AMD facility. Therefore, all previous Board Orders and other regulatory actions for MMI now apply to AMD and AMD is named as the discharger for the AMD facility located in Subunit 2.

Pursuant to California Health and Safety Code Sections 25356.1 (c) and (d), the identified responsible parties associated with the release of contaminants to the

subsurface in Subunit 2 are AMD, NSC, UTC, and ST. AMD, NSC, UTC, and ST are hereinafter referred to as dischargers.

AMD and NSC are primarily responsible for this discharge for purposes of this Order. NSC shall not be held responsible for soil and ground water contamination emanating from surface activities at the AMD facility.

The purpose of final remedial actions in each subunit is to reduce additional migration of contaminants from soil and ground water and to control the migration of contaminated groundwater from each subunit. The intent of actions required in this Order is to expedite cleanup of ground water in Subunit 2 and to prevent movement of the contaminated ground water to other subunits and potential vertical migration into aquifers that currently serve as drinking water sources.”

3. Provision C.3. Revise to read: “AMD is responsible for and shall comply with all tasks and compliance time schedules in Provision C.2. above. NSC is responsible for and shall comply with all tasks that are related to the commingled plume of ground water contamination in Subunit 2 and soil contamination that may have resulted from such ground water contamination. NSC is not responsible for soil and ground water contamination emanating from surface activities at the AMD facility. Specifically, NSC and AMD shall jointly comply with Tasks 1 and 10 through 16 and associated compliance time schedules of Provision C.2. above, as they relate to the commingled plume of ground water contamination.

If NSC fails to comply with any of the provisions of this Order, within sixty (60) days of the Executive Officer’s determination and actual notice, UTC and ST shall comply with the provisions of this Order.”

C. Order No. 91-140 for subunit 3 shall be amended as follows:

1. Heading. Hewlett-Packard shall be removed from the order as a discharger.
2. Finding 2. Modify to read:

“Separate Board Orders have been prepared for each Subunit in Operable Unit 1. The three Board Orders combined comprise the final cleanup plans for Operable Unit 1. As described in Finding 1. above, the three Subunits and corresponding three Board orders facilitate the allocation of responsibility for soil and ground water contamination among the facilities in Operable Unit 1.

The Board will adopt a Remedial Action Plan (RAP) for Operable Unit 1 after the Board issues Nonbinding Preliminary Allocation of Responsibility (NBAR) for

Operable Unit 1. With the exception of the NBAR requirement, the three Orders comply with all other requirements for a RAP.

As shown in Figure 1, the AMD facility, located in Subunit 2, is directly downgradient of the NSC and former UTC facilities, located in Subunit 1. In Subunit 2, the ground water contaminant plumes emanating from the NSC and former UTC facilities are considered to be commingled with the ground water contaminant plume from the AMD facility. Furthermore, the commingled plumes extend from Subunit 2 into subunit 3. Therefore, NSC, UTC, and AMD are referred to as dischargers in this Board Order for Subunit 3.

On September 14, 1987, NSC and UTC executed an agreement whereby NSC assumed soil and ground water cleanup responsibility for the former UTC facility. Hewlett Packard (HP) purchased the former UTC facility in 1982. In 1996 HP sold the former UTC facility to Applied Materials. UTC, as the party who released contaminants to the soil and ground water at the former UTC facility, is named as a discharger. However, NSC has assumed full responsibility to complete all necessary soil and ground water remedial action programs related to the former UTC facility and the ground water plume emanating from the facility.

NSC notified the Board on July 12, 1991 that one of the source areas at the NSC facility, Building 19, was owned by the Shahinian Trust (ST). ST was notified on July 26, 1991 that, as landowner of Building 19, ST is secondarily responsible for the cleanup of soil and ground water contamination emanating from NSC's Building 19 source area.

Therefore, UTC and ST are secondarily liable and have responsibility for the soil and ground water cleanup only in the event that NSC fails to comply with prohibitions, specifications, and provisions of this Board Order.

Semiconductor manufacturing operations were begun at the current AMD facility by Monolithic Memories (MMI) in 1970. AMD acquired MMI and their property in 1987 and assumed responsibility for continuing the soil and ground water investigations and remediation program for the AMD facility. Therefore, all previous Board Orders and other regulatory actions for MMI now apply to AMD and AMD is named as the discharger for the AMD facility located in Subunit 2.

Pursuant to California Health and Safety Code Sections 25356.1 (c) and (d), the identified responsible parties associated with the release of contaminants to the subsurface in Subunit 3 are NSC, AMD, UTC, and ST. NSC, AMD, UTC, and ST are hereinafter referred to as dischargers.

The purpose of final remedial actions in each subunit is to reduce additional migration of contaminants from soil into ground water and to control the migration of contaminated groundwater from each subunit. The intent of actions

required in this Order is to expedite cleanup of ground water in Subunit 3 and to prevent movement of the contaminated ground water to other subunits and potential vertical migration into aquifers that currently serve as drinking water sources.”

3. Provision C.2. Revise to read: *“If NSC fails to comply with any of the provisions of this Order, within sixty (60) days of the Executive Officer’s determination and actual notice, UTC and ST shall comply with the provisions of this Order.”*

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 21, 1998.

Loretta K. Barsamian
Executive Officer